



200 West Mercer St. ♦ Suite 401 ♦ Seattle, WA 98119
Phone: 206.378.1364 ♦ Fax: 206.217.0089 ♦ www.windwardenv.com

April 30, 2007

Ms. Barbara Schmalz
USDO
Denver Federal Center
Sixth and Kipling, Bldg. 56
Room 2400
Mailstop D-110
Denver, CO 80225-0007

Dear Ms. Schmalz:

Windward appreciates the thoughtful recommendations and analyses set forth in the *Natural Resource Damage Assessment and Restoration Federal Advisory Committee Draft Final Report*. Implementing the recommendations would help progress toward clearer linkages between injury assessment and restoration of injured resources and a more efficient process for implementing restoration. In particular, Windward believes that significant improvements in NRDAR principals and practices can come about from continued work to develop guidance regarding appropriate biological scales and habitats for injury analysis.

In context of this issue, DOI should give further consideration to the spatial scale of the injury relative to the levels of biological organization and habitat issues under consideration. For example, although the benthic community structure in a localized area may be clearly impacted from the release of a toxic substance, it is not clear at what spatial scale this impact becomes important to the resources that rely on the benthic community. Further consideration must be given to the spatial scale at which the higher-level consumers integrate their resources. The same spatial extent of impact may have a greater effect on service flow to a fish species with a small foraging range than a migratory wading bird with a larger home range. This further illustrates the need to focus injury assessments on the specific resources that are locally important.

Regarding the analysis of the first question on Pages 11 and 12, we agree that quantification of injury based on habitat evaluation can be a useful approach for injury quantification because it is scalable and translates easily to restoration actions. However, by itself, documenting habitat degradation is not directly translatable to service losses because it relies on simplifying assumptions to relate the area of impact to services provided the biological population or subpopulation inhabiting that area.

Because these assumptions are not generally explicit, use of the assessment area to define a population is inconsistent with the basic scientific underpinnings of what a population is. We support further discourse on methods for transparently relating habitat evaluation procedures to ecological service losses. The concepts involving the definition of baseline relative to ecological populations and services provided by them are inherently complex. We strongly suggest that these concepts be more thoroughly examined through additional subcommittee work, as they are central to understanding and bounding injury assessments.

Based on our collective experience, individual scale metrics are not useful for injury quantification. Because quantifiable ecological services are not generally provided by small numbers of individual organisms, individual-level metrics are not useful in terms of quantifying the magnitude of an injury.

Finally, we support the recommendations set forth to expedite restoration planning and cost-effective and efficient restoration after awards or settlements are secured. We recommend that in the spirit of Cooperative Conservation principals, DOI should coordinate creation of a restoration action inventory. Such a tool would be useful under other regulatory frameworks aside from NRDAR. Additionally, beyond integration with NEPA, it would be useful to explore the extent to which other federal permit processes such as endangered species consultation, and Army Corps wetland permits could be streamlined in the NRDAR process.

Sincerely,



Lisa Saban, Partner
Windward Environmental LLC



Matt Luxon, Environmental Scientist
Windward Environmental LLC

cc: Mike Johns